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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/851,858
Filing Date: May 09, 2001
Appellant(s): GOLLAMUDI, SRIDHAR

MAILED
JUL 1 1 2007
GROUP 2600

Mark W. Sincell
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 29, 2007 appealing from the Office action mailed May 10, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

It is noted, however, that the definition of "auto-correlation" provided in section V of appellant's brief was not contained in the specification of the invention as originally filed. Rather, the only reference to "auto-correlation" in the specification as originally filed is contained on page 9, ll. 22-32.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Prior Art of Record

Harrision (U.S. Pat. No. 6154485)

Kalliojarvi (U.S. Pat. No. 6121927)

Alamouti et al (U.S. Pat. No. 6185258)

Dabak et al (U.S. Pat. No. 6594473)

Rice (U.S. Pub. No. 2002/0172260)

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 4-6, 8, 9, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harrision (US 6154485 – previously cited) in view of Kalliojarvi (US 6121927).

Regarding claim 1, Harrison discloses a method of encoding information symbols for multiple antennae transmission (abstract) comprising the steps of: generating a code matrix B_0 or parallel traffic channels (fig. 1, refs. 64, and 66; col. 3, lines 8-12); generating a transformation matrix L (fig. 5; col. 7, lines 40-60) based on a channel estimate (col. 4, lines 28-38); and combining the code matrix B_0 with the transformation matrix L (α, V1, V0) to obtain a result B for controlling the amount of beamforming

relative to the amount of orthogonal coding in signals transmitted from the multiple antennae (fig. 5; col. 8, lines 5-35). Figure 1 shows the code matrix channels 64 and 66 which are output as 72 and 74. Figure 5 represents the realization of the combination of transformation matrix L by the code matrix (72 and 74). The transformation matrix of figure 5 is depicts cross multiplication and summation of transformation matrix elements $(1-\alpha^2)^{1/2}$ and the code matrix. The term alpha (α) is used to control the amount of beamforming relative the amount of orthogonal coding in the output of the combination (col. 8, lines 5-35). Although Harrison discloses applying the received channel estimate (col. 4, lines 28-38) to the transformation matrix, Harrison does not explicitly disclose that the transformation matrix is based upon *an autocorrelation* of a channel estimate. However, Kalliojarvi teaches performing an autocorrelation on a channel estimate to determine a bearing of a received signal (col. 3, lines 4-11). Kalliojarvi utilizes an antenna array to steer the radiation of a transmitted signal or create a transmission beam (col. 4, lines 15-25). As illustrated in figure 7, a channel estimate associated with a received signal (70) is correlated (72) with a one of the received multipaths of the signal (71) such that a computation of signal bearing is made (75). The correlation is considered an auto-correlation because the channel estimate is correlated with a multipath version of itself. Using the bearing information, the transmitter can create a proper transmission beam via the antenna array. Kalliojarvi teaches that, for determining the bearing of a signal, using the auto-correlation of a channel estimate is advantageous over conventional techniques because the number of required computational operations is reduced (col. 3, lines 30-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to apply the beamforming transformation matrix based on an autocorrelation of the

channel estimate as taught by Kalliojarvi in the method of Harrison because it could be utilized to reduce the number of computational operations required in the generation of a transmission beam.

Regarding claim 2, Harrison in view of Kalliojarvi disclose the limitations of claim 1 as applied above. Further, as broadly as claimed, the transformation matrix L is a matrix such that the conjugate transpose of L multiplied by L generates a correlation matrix Φ. Because no limitations are implied for the value of the correlation matrix in the claims or the specification, it is understood that the matrix L multiplied by the conjugate transpose of the matrix L would sufficiently result in the correlation matrix as broadly as claimed.

Regarding claim 4, Harrison in view of Kalliojarvi disclose the limitations of claim 4 as applied to claims 1 and 2 above.

Regarding claim 5, Harrison in view of Kalliojarvi disclose the limitations of claim 4 as applied above. Further, Harrison discloses the desired correlation parameter α (equivalent to λ of the instant application). Alpha is used to control the amount of beamforming relative the amount of orthogonal coding in the output of the combination (col. 8, lines 5-35). According to figure 5, the transformation matrix and hence the correlation matrix is comprised of alpha.

Regarding claim 6, Harrison in view of Kalliojarvi disclose the limitations 5 as applied above. Further, as defined by claim 4, line 5 ($\Phi = L^H L$), the transformation matrix L is the matrix square root of the desired correlation matrix (i.e. inverse of $\Phi = L^H L$).

Regarding claim 8, Harrison discloses by figure 1 a method of generating signals for transmitting from at least two antennae of a wireless communications system (abstract) comprising the steps of: feeding a stream of incoming information symbols

(TCH; 58) to an encoder (60, 76); feeding a signal representative of a beamforming weight parameter (W0, W1) to the encoder to modify the stream of information symbols; determining a code correlation parameter (α; col. 7, lines 50-53) based on a channel estimate (col. 4, lines 28-38); feeding the code correlation parameter (fig. 5; α) to the encoder to control the proportion of orthogonal coding relative to beamforming of the stream of information symbols that are to be transmitted (fig. 5; col. 8, lines 5-35) ; and feeding the stream of information symbols modified by the code correlation parameter to at least two antennae for transmission (116, 118). The spreading codes W0 and W1 (col. 3, lines 12-18) are considered beamforming weight parameters because they differentiate or weight and modify the information signals. The adaptive array processor (76) of figure 1, which is considered to be part of the signal encoder, may be implemented by the matrix multiplication of figure 5 (col. 5, lines 10-18). The encoder embodiment of figure 5 must necessarily be "fed" the code correlation parameter α because it is used as input to the multipliers 172 and 176. Harrison discloses that the transmitter may adapt (beamforming vs. orthogonal transmit diversity) the transmission according to the code correlation parameter generated in response to the feedback data which is supplied by the channel measurement and feedback processor (fig. 1, ref. 149; col. 4, lines 28-39). Although Harrison discloses determining the code correlation parameter based on the channel estimate (col. 4, lines 28-38), Harrison does not explicitly disclose that the code correlation parameter is based upon *an autocorrelation* of a channel estimate. However, Kalliojarvi teaches performing an autocorrelation on a channel estimate to determine a bearing of a received signal (col. 3, lines 4-11). Kalliojarvi utilizes an antenna array to steer the radiation of a transmitted signal or create a transmission beam (col. 4, lines 15-25). As illustrated in figure 7, a channel estimate

associated with a received signal (70) is correlated (72) with a multipath reference (71) such that a computation of signal bearing is made (75). The correlation is considered an auto-correlation because the channel estimate is correlated with a multipath version of itself. Using the bearing information, the transmitter can create a proper transmission beam via the antenna array. Kalliojarvi teaches that, for determining the bearing of a signal, using the auto-correlation of a channel estimate is advantageous over conventional techniques because the number of required computational operations is reduced (col. 3, lines 30-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to apply the beamforming transformation matrix based on an autocorrelation of the channel estimate as taught by Kalliojarvi in the method of Harrison because it could be utilized to reduce the number of computational operations required in the generation of a transmission beam.

Regarding claim 9, Harrison in view of Kalliojarvi disclose the limitations of claim 8 as applied above. Further, Harrison discloses that the code correlation parameter determines the correlation of the encoded signals to the different antennae (fig. 5). The multiplication blocks 172 and 176 are responsive to the code correlation parameter α according to the evaluation $(1-\alpha^2)^{1/2}$. Therefore, the encoded signals are thereby responsive to the different antennae (connected to 94 and 96) according to the code correlation parameter α.

Regarding claim 14, Harrison in view of Kalliojarvi disclose the limitations of claim 9 as applied above. Further, Harrison discloses a duplex communication system having a forward and reverse link (fig. 1; col. 4, lines 28-38) and that the code correlation parameter is determined from signals received on the reverse link (col. 4, line 64 – col.

5, line 17). Harrison discloses that adaptive array weights (90 and 92) are computed according to the feedback (col. 4, lines 35-40). Furthermore, in the adaptive array encoder embodiment of figure 5, the code correlation parameter α (col. 7, lines 47-60) is further responsive to the feedback of communications method (col. 8, lines 5-35, *lines 32-35*).

Regarding claim 15, Harrison in view of Kalliojarvi disclose the limitations of claim 14 as applied above. Further, Harrison discloses determining an adaptive array weight or a channel correlation coefficient (fig. 1, refs. V0 and V1; col. 4, lines 29-39) from signals received on the reverse link.

3. Claims 3, 7, 20, 29-33, 35, and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harrison in view of Kalliojarvi, and in further view of Alamouti et al (US 6185258 – previously cited; hereafter "Alamouti").

Regarding claim 3, Harrison in view of Kalliojarvi discloses the limitations of claim 2 as applied above. Harrison in view of Kalliojarvi does not explicitly disclose that the code matrix B_0 is orthogonal although orthogonal transmit diversity is utilized (col. 1, lines 45-57; col. 8, lines 4-12). However, Alamouti discloses the generation of an orthogonal code matrix for transmission of data over two or more antennas (abstract). An orthogonal code matrix is disclosed in table 1 as the outputs of antenna 1 and 2 over the time periods t and t+T (col. 4, line 20). Alamouti discloses that the use of orthogonal coding results in space, time and frequency diversity (col. 2, lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to utilize an orthogonal code matrix as disclosed by Alamouti in the encoding method of Harrison in view of Kalliojarvi because it would allow for space, time and frequency diversity. Further, the use of an orthogonal code matrix is obvious in view

of Harrison alone because in the case that $\alpha = 0$, orthogonal transmit diversity mode is solely enabled (col. 8, lines 5-12).

Regarding claim 7, Harrison in view of Kalliojarvi disclose the limitations of claim 4 as applied above. Harrison in view of Kalliojarvi do not explicitly disclose that the code matrix B_0 is generated by encoding symbols of a serial data stream with orthogonal code to generate an orthogonal code matrix B_0 although orthogonal transmit diversity is utilized (col. 1, lines 45-57; col. 8, lines 4-12). However, Alamouti discloses the generation of an orthogonal code matrix for transmission of data over two or more antennas (abstract). An orthogonal code matrix is disclosed in table 1 as the outputs of antenna 1 and 2 over the time periods t and t+T (col. 4, line 20). The matrix is generated by encoding the symbols s0 and s1 of a serial data stream by an orthogonal code as shown in the result of table 1. Alamouti discloses that the use of orthogonal coding results in space, time and frequency diversity (col. 2, lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to utilize an orthogonal code to generate the code matrix B_0 as disclosed by Alamouti in the encoding method of Harrison in view of Kalliojarvi because it would allow for space, time and frequency diversity. Further, the use of an orthogonal code matrix is obvious in view of Harrison alone because in the case that $\alpha = 0$, orthogonal transmit diversity mode is solely enabled (col. 8, lines 5-12).

Regarding claim 20, Harrison in view of Kalliojarvi disclose the limitations of claim 8 as applied above. Harrison in view of Kalliojarvi do not explicitly disclose that the stream of incoming signals is orthogonal although orthogonal transmit diversity is utilized (col. 1, lines 45-57; col. 8, lines 4-12). However, Alamouti teaches the generation of an orthogonal code matrix for transmission of data over two or more antennas (abstract).

An orthogonal code matrix is disclosed in table 1 as the outputs of antenna 1 and 2 over the time periods t and t+T (col. 4, line 20) which creates an output to the antennas which is a symbol and the complex conjugate of the symbol (period t vs. t+T). Alamouti discloses that the use of orthogonal coding results in space, time and frequency diversity (col. 2, lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to generate an orthogonal code matrix with orthogonal symbols as the stream of incoming signals as taught by Alamouti in the method of Harrison in view of Kalliojarvi because it would allow for space, time and frequency diversity. Further, the use of an orthogonal code matrix is obvious in view of Harrison alone because in the case that $\alpha = 0$, orthogonal transmit diversity mode is solely enabled (col. 8, lines 5-12). Thereby, in the method of Harrison in view of Kalliojarvi, and in further view of Alamouti the symbol signal transmitted by each antenna at each symbol time is the sum of one or more signals (fig. 5), each of which is proportional to the product of one of the incoming symbols (72) and their complex conjugates (74) with a number that is determined by lambda or alpha (α). With orthogonal code as the input to the encoder embodiment (fig. 5) of Harrison, the symbol output (94) would be a composition or product of one incoming signal (72) with their complex conjugate (74) with a number that is determined by alpha (172 and 176; $(1-\alpha^2)^{1/2}$).

Regarding claim 29, Harrison discloses a method of encoding information symbols for multiple antennae transmission (abstract) comprising the steps of: determining a plurality of codes (fig. 1. refs. 72 and 74); estimating at least one channel estimate (α; col. 7, lines 50-53; col. 4, lines 28-38) of at least one channel (fig. 1, ref. 54); and determining an amount of beamforming relative to an amount of orthogonal coding

(col. 8, lines 5-35) and signals transmitted (fig. 1, refs. 94, 96) from the multiple antennae (fig. 1, refs. 116, 118) based upon the plurality of orthogonal codes and the at least one autocorrelation (fig. 5). Harrision discloses estimating at least one channel estimate but not explicitly at least one autocorrelation of at least one channel. However, Kalliojarvi teaches determining an autocorrelation of a channel estimate for efficient computation of a signal bearing as applied to claim 1 above. Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to autocorrelate a channel estimate as taught by Kalliojarvi in the method of Harrison in view of Kalliojarvi because it could be utilized to reduce the number of computational operations required in the generation of a transmission beam.

Further regarding claim 29, Harrison in view of Kalliojarvi do not explicitly disclose that the plurality of codes is orthogonal although orthogonal transmit diversity is utilized (col. 1, lines 45-57; col. 8, lines 4-12). However, Alamouti teaches the generation of an orthogonal code matrix for transmission of data over two or more antennas (abstract). An orthogonal code matrix is disclosed in table 1 as the outputs of antenna 1 and 2 over the time periods t and t+T (col. 4, line 20) which creates an output to the antennas which is a symbol and the complex conjugate of the symbol (period t vs. t+T). Alamouti discloses that the use of orthogonal coding results in space, time and frequency diversity (col. 2, lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to generate an orthogonal code matrix with orthogonal symbols as the plurality of codes of as taught by Alamouti in the method of Harrison in view of Kalliojarvi because it would allow for space, time and frequency diversity.

Regarding claim 30, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of claim 29 as applied above. Further, using the encoding method of Alamouti, the method of Harrison in view of Alamouti comprises determining a code matrix wherein each column of the code matrix is associated with one of the plurality of orthogonal codes such that the columns are orthogonal to each other (Alamouti; col. 4, line 20, periods t vs. t+T).

Regarding claim 31, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of claim 29 as applied above. Further, in the method of Harrison in view of Alamouti, the forward and reverse link is the same over the air channel. Therefore, the channel estimation (col. 8, lines 32-35) disclosed by Harrison is the same for both the forward and reverse links.

Regarding claim 32, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of the claim as applied to claim 29 above. Further, in the method of Harrison in view of Kalliojarvi, and in further view of Alamouti, the autocorrelation is an autocorrelation of a channel estimate which was subject to one round-trip between delay between a pair of transceivers (Harrison; fig. 1, refs. 52 and 56). Therefore, the estimation of the autocorrelation comprises determining at least one round-trip delay associated with the at least one channel because the channel estimate which is correlated has been subject to one round-trip delay.

Regarding claim 33, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of the claim as applied to claim 33 above.

Regarding claim 35, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of claim 29 as applied above. Further, Harrison discloses

encoding at least one symbol using the determined about of beamforming and orthogonal coding (col. 8, lines 5-35).

Regarding claim 36, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of claim 35 as applied above. Further, Harrison discloses transmitting the at least one encoded symbol using the determined amount of beamforming and orthogonal coding (fig. 1, refs. 116 and 118).

4. Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Harrison in view of Dabak et al (US 6594473 – previously cited; hereafter "Dabak").

Regarding claim 10, Harrison in view of Kalliojarvi disclose the limitations of claim 9 as applied above. Harrison discloses beamforming weight codes W0 and W1 being applied to the information symbols, but does not disclose that they are complex representing a magnitude and a phase. However, Dabak discloses a multiple antenna transmission method by figure 4 which uses complex beamforming weight parameters having magnitude and phase (fig. 4, refs. W1 and W2). The beamforming weight parameters are utilized by the closed loop communications system to advantageously modify the beam outputs form the transmitter (col. 3, lines 10-23; col. 4, lines 5-10; col. 4, lines 45-50; col. 5, lines 5-30). Dabak discloses the method of generating the values of the weights and it is obvious that the weights have a complex value due to the complex notation of the equations used (col. 10, line 12 – col. 12, line 25). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to utilize complex adaptive beamforming weight parameters according to the closed loop response of the communications method as taught by Dabak in the communications method of Harrison in view of Kalliojarvi because it could be responsive to feedback information and adjust the transmission beam accordingly. It

is well known in the art that a complex number represents one having magnitude and phase.

5. Claim 34 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Harrison in view of Kalliojarvi, in further view of Alamouti, and in further view of Rice (US 2002/0172260 – previously cited).

Regarding claim 34, Harrison in view of Kalliojarvi, and in further view of Alamouti disclose the limitations of claim 29 as applied above. Harrison discloses that the amount of beamforming with respect to orthogonal coding is dependent upon the channel estimation feedback, but does not explicitly disclose that the feedback is used to effect a lookup table to determine the value of α which determine the amount of beamforming relative to orthogonal coding (col. 8, lines 5-35). However, the use of lookup tables is notoriously known in the art and Rice teaches the use of a lookup table for the selection of a symbol (para. 0079). Rice teaches that the use of a lookup table is preferable because it requires a minimal amount of hardware. Therefore, it would have been obvious to one having ordinary skill in the art to utilize a lookup table as taught by Rice in the method of Harrison in view of Kalliojarvi, and in further view of Alamouti because it could advantageously be used to minimize hardware requirements.

(11) Response to Argument

A. Appellant's Argument: With respect to claims 1, 2, 4-6, 8, 9, 14, and 15, appellant argues that the primary reference Harrison does not describe determining a code correlation parameter *based on an auto-correlation* of a channel estimate and the reference Killiojarvi likewise fails to disclose auto-correlation of a channel estimate.

Examiner's Response: As applied above, Harrison discloses all of the features of independent claim 1 except determining a code correlation parameter *based on an auto-correlation* of a channel estimate. Specifically, Harrison discloses determining a code correlation parameter (i.e., fig. 4, α, V1, V0) *based upon a received channel estimate* (col. 4, lines 28-38) from a channel measurement and feedback processor (fig. 1, ref. 149) but not that the code correlation parameter is based upon an *auto-correlation* of the received channel estimate. Therefore, the difference between the prior art reference Harrison and the instant application is only that Harrison receives, in generic terms, a channel estimate to determine a code correlation parameter while the instant invention receives a channel estimate via an *auto-correlation* to determine the parameter.

However, the Examiner has applied the teachings and disclosure of Kalliojarvi as motivation to modify Harrison to use an auto-correlation in the reception of the channel estimate. Kalliojarvi's field of art is closely analogous to Harrison's. Kalliojarvi utilizes an antenna array to steer the radiation of a transmitted signal or create a transmission beam (col. 4, lines 15-25). As illustrated in figure 7, a channel estimate associated with a received signal (70) is correlated (72) with a one of the received multipaths of the signal (71) such that a computation of signal bearing is made (75). Kalliojarvi's correlation is auto-correlation because the channel estimate is correlated with a multipath version of itself. Using the bearing information, the transmitter can create a proper transmission beam via the antenna array. Kalliojarvi teaches that, for determining the bearing of a signal, using the auto-correlation of a channel estimate is

advantageous over conventional techniques because the number of required computational operations is reduced (col. 3, lines 30-35).

Appellant asserts that Kalliojarvi teaches the use of *cross-correlation* rather than *auto-correlation*. The Applicant distinguishes between cross-correlation and auto-correlation by noting that cross-correlation is correlation between a received signal and a reference of the received signal while auto-correlation is correlation between a received signal and the received signal itself. The Examiner points out that Kalliojarvi does, in fact, teach auto-correlation of the type described by the Applicant.

Kalliojarvi's diagram of figure 7 is referenced as illustrating auto-correlation. The Appellant suggests that the reference estimate E_{REF} (71) is a *copy* of the received signal rather than the received signal itself. However, Kalliojarvi clearly discloses that the reference signal is a one of the multipaths of the received signal (col. 5, lines 47-50). Therefore, Kalliojarvi actually discloses auto-correlation <u>*because correlation is performed among multipaths of the same received signal*</u>. See column 3, lines 4-10; "the multipath propagated signal is first received by means of an antenna array . . . and then correlated to determine relative time differences between them."

Furthermore, it is noted by the Examiner that no definition of auto-correlation is provided in the specification as originally filed. Rather, the only reference to auto-correlation is made on page 9, lines 22-32. However, the Appellant has repeatedly argued that auto-correlation is "a well known mathematical function" and attempts to afford it a very specific definition. One such definition begins on page 3 of Appellant's appeal brief. This definition was not contained in the specification as originally filed and

is not part of the claimed subject matter. Instead, the Examiner is permitted to make a reasonable interpretation of auto-correlation as claimed in view of the specification. No specificity is provided in any claim regarding auto-correlation and Kalliojarvi's auto-correlation sufficiently meets the limitations of the claim. Finally, even the Appellant's definition of auto-correlation matches Kalliojarvi's. On page 4, Appellant states that autocorrelation is performed upon a signal and a time shifted version of itself (i.e. $X(t+\delta)$ where t is a time delay). This precisely matches Kalliojarvi's correlation of a received signal with a multipath version of itself. A multipath version of a signal is one which is simply delayed in time with respect to an original. Such signals are caused by the original signal being bounced off buildings in urban areas and similar structures resulting in a delay.

B. With respect to claims 3, 7, 20, 29-31, and 35-36, Appellant has relied upon the same argument as applied above and the Examiner relies upon the same response.

C. With respect to claim 10, Appellant has relied upon the same argument as applied above and the Examiner relies upon the same response.

D. With respect to claim 34, Appellant has relied upon the same argument as applied above and the Examiner relies upon the same response.

(12) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
Jason M. Perilla

JMP

Art Unit 2611
July 2, 2007

jmp

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